

## AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

### Listing of Claims:

1           1. (Currently amended) A method for implementing a sleep proxy,  
2     comprising:  
3           receiving a registration request from a device, wherein the registration  
4     request contains:  
5                     sufficient information to allow the sleep proxy to generate a  
6                     wakeup packet that can wake up the device,  
7                     a list of requests for which the sleep proxy can answer, and  
8                     a lease expiration time, wherein upon reaching the lease  
9                     expiration time, the sleep proxy cancels the device registration; and  
10           adding the device to the list of devices for which the sleep proxy answers;  
11           receiving a request at the sleep proxy for information pertaining to a  
12     service provided by the ~~by a~~ device;  
13           determining if the device is a device for which the sleep proxy answers;  
14           if so, determining if the request is a request for which the sleep proxy can  
15     answer; and  
16           if so, sending a response to the request on behalf of the device.

1           2. (Original) The method of claim 1, wherein if the request is not a request  
2     for which the sleep proxy can answer, the method further comprises sending a  
3     wakeup packet to the device, wherein the wakeup packet is a packet that causes  
4     the device to exit a power-saving mode.

1           3-4 (Canceled).

1           5. (Currently amended) The method of claim 1-~~claim 4~~, wherein an  
2 internal timer in the device wakes up the device so that the device can renew its  
3 registration with the sleep proxy before the registration expires.

1           6. (Original) The method of claim 1, further comprising:  
2 receiving a notification from the device that the device is entering a  
3 power-saving state; and  
4 in response to the notification, configuring the sleep proxy to answer for  
5 the device.

1           7. (Original) The method of claim 1, further comprising:  
2 receiving a notification from the device that the device has exited a power-  
3 saving state; and  
4 in response to the notification, configuring the sleep proxy not to answer  
5 for the device.

1           8. (Original) The method of claim 1, further comprising implementing a  
2 second sleep proxy that duplicates the functionality of the sleep proxy for fault-  
3 tolerance purposes.

1           9. (Original) The method of claim 1, wherein sending a response to the  
2 request further comprises waiting a random period of time prior to sending the  
3 response, wherein waiting the random period of time facilitates duplicate answer  
4 suppression between sleep proxies.

1           10. (Currently amended) A computer-readable storage medium storing  
2 instructions that when executed by a computer cause the computer to perform a  
3 method for implementing a sleep proxy, the method comprising:  
4           receiving a registration request from a device, wherein the registration  
5 request contains:  
6                       sufficient information to allow the sleep proxy to generate a  
7 wakeup packet that can wake up the device,  
8                       a list of requests for which the sleep proxy can answer, and  
9                       a lease expiration time, wherein upon reaching the lease  
10 expiration time, the sleep proxy cancels the device registration; and  
11 adding the device to the list of devices for which the sleep proxy answers;  
12 receiving a request at the sleep proxy for information pertaining to a  
13 service provided by the ~~by a~~ device;  
14 determining if the device is a device for which the sleep proxy answers;  
15 if so, determining if the request is a request for which the sleep proxy can  
16 answer; and  
17 if so, sending a response to the request on behalf of the device.

1           11. (Original) The computer-readable storage medium of claim 10,  
2 wherein if the request is not a request for which the sleep proxy can answer, the  
3 method further comprises sending a wakeup packet to the device, wherein the  
4 wakeup packet is a packet that causes the device to exit a power-saving mode.

1           12-13 (Canceled).

1           14. (Currently amended) The computer-readable storage medium of claim  
2 10-claim 13, wherein an internal timer in the device wakes up the device so that

3 the device can renew its registration with the sleep proxy before the registration  
4 expires.

1 15. (Original) The computer-readable storage medium of claim 10,  
2 wherein the method further comprises:  
3 receiving a notification from the device that the device is entering a  
4 power-saving state; and  
5 in response to the notification, configuring the sleep proxy to answer for  
6 the device.

1 16. (Original) The computer-readable storage medium of claim 10,  
2 wherein the method further comprises:  
3 receiving a notification from the device that the device has exited a power-  
4 saving state; and  
5 in response to the notification, configuring the sleep proxy not to answer  
6 for the device.

1 17. (Original) The computer-readable storage medium of claim 10,  
2 wherein the method further comprises implementing a second sleep proxy that  
3 duplicates the functionality of the sleep proxy for fault-tolerance purposes.

1 18. (Original) The computer-readable storage medium of claim 10,  
2 wherein sending a response to the request further comprises waiting a random  
3 period of time prior to sending the response, wherein waiting the random period  
4 of time facilitates duplicate answer suppression between sleep proxies.

1 19. (Currently amended) An apparatus that implements a sleep proxy,  
2 | comprising:

3        a registration mechanism configured to receive a registration request from  
4 a device, wherein the registration request contains:  
5                sufficient information to allow the sleep proxy to generate a  
6                wakeup packet that can wake up the device,  
7                a list of requests for which the sleep proxy can answer, and  
8                a lease expiration time;  
9        a list addition mechanism configured to add the device to the list of  
10 devices for which the sleep proxy answers;  
11        a cancellation mechanism that is configured to cancel the device  
12 registration upon reaching the lease expiration time;  
13        a receiving mechanism configured to receive a request at the sleep proxy  
14 for information pertaining to a service provided ~~by the~~ by a device;  
15        a determination mechanism configured to determine if the device is a  
16 device for which the sleep proxy answers;  
17        a second determination mechanism configured to determine if the request  
18 is a request for which the sleep proxy can answer if the device is a member of the  
19 list of devices for which the sleep proxy answers; and  
20        a response mechanism configured to send a response to the request on  
21 behalf of the device if the request is a request for which the sleep proxy can  
22 answer.

1        20. (Original) The apparatus of claim 19, wherein if the request is not a  
2 request for which the sleep proxy can answer, the apparatus further comprises a  
3 wakeup mechanism configured to send a wakeup packet to the device that causes  
4 the device to exit a power-saving mode.

1        21-22 (Canceled).

1 | 23. (Currently amended) The apparatus of claim 19~~-claim 22~~, wherein an  
2 internal timer in the device wakes up the device so that the device can renew its  
3 registration with the sleep proxy before the registration expires.

1 24. (Original) The apparatus of claim 19, further comprising:  
2 a notification mechanism configured to receive a notification from the  
3 device that the device is entering a power-saving state; and  
4 a configuration mechanism configured to configure the sleep proxy to  
5 answer for the device in response to the notification.

1 25. (Original) The apparatus of claim 19, further comprising:  
2 a notification mechanism configured to receive a notification from the  
3 device that the device has exited a power-saving state; and  
4 a configuration mechanism configured to configure the sleep proxy not to  
5 answer for the device in response to the notification.

1 26. (Original) The apparatus of claim 19, further comprising a second  
2 sleep proxy that duplicates the functionality of the sleep proxy for fault-tolerance  
3 purposes.

1 27. (Original) The apparatus of claim 19, wherein the response mechanism  
2 is further configured to wait a random period of time prior to sending the  
3 response, wherein waiting the random period of time facilitates duplicate answer  
4 suppression between sleep proxies.